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ABSTRACT

The impact of participation in a vocational student organization (VSO) on student achievement was examined. First, an exhaustive review of the recent literature on VSOs was conducted. In addition, a survey aimed at state directors of VSOs was developed and pilot tested on a purposefully-selected sample of 25 state directors of VSOs. A response rate of 93% was achieved. Although more than 250 documents on VSOs were identified, an in-depth review and analysis of the applicable literature revealed only a limited amount of literature and research documenting or chronicling the impact of VSOs on student achievement. Much of the literature advocated benefits that were not adequately verified in the reports, were supported by limited or weak methodologies in the areas of research and analysis, and were not described in sufficient detail to support duplication of the results. It was recommended that research in the area of VSO impact, benefits, and assessments be conducted to identify VSOs' strengths and weaknesses and provide baseline data. The state VSO director survey validation panel, field test group, and pilot study responses indicated that the survey is adequate for collecting the data that would be necessary in a study designed to document VSO-related efforts at the state level. (Contains 76 references.) (MN)

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National Center for Research in Vocational Education

University of California, Berkeley

Working Papers

VOCATIONAL STUDENT ORGANIZATIONS AND STUDENT ACHIEVEMENT

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FOREWORD

This paper originated with a request by a state director of vocational and technical education. The director wanted to know what research was available to document the impact of participation in vocational student organizations (VSOs) on student outcomes. A request for information on the subject to the National Center for Research in Vocational Education resulted in a field-initiated project intended to answer the question. The project was funded in late summer 1999 and ended in December 1999.

In short, the answer to the director's question is "very little." Little actual research can be found among the myriad articles and papers in the professional and research literature dealing with VSOs and student outcomes.

As researchers we must condition ourselves to question assumptions and to test them with legitimate research. As members of the vocational and technical education community, we have tended to accept without question the widely held beliefs that VSOs contribute to the accomplishment of the goals of our programs and to the improvement of the lives of students. At the conclusion of this project, the authors remain convinced that, indeed, those assumptions and beliefs are true. At the same time, we now understand that even though we hold to those beliefs, their truth has not been adequately tested by research. We also understand that we must begin to question the validity of our assumptions about the contributions of VSOs until that research is undertaken and completed.

EXECUTIVE SUMMARY

A traditionally accepted component of career and technical education is the vocational student organization (VSO). VSOs such as Future Business Leaders of America (FBLA) and SkillsUSA-Vocational Industrial Clubs of America (VICA) are cocurricular rather than extracurricular in nature. Today, the U.S. Department of Education recognizes twelve VSOs, which represent more than 1.5 million students at any given time.

For many years, VSO advocates have argued that participation in such organizations provides positive benefits to students in career and technical education. VSO proponents include students, former students, parents, local community members, and the vocational and technical teachers. Listed benefits include student motivation, opportunities for contextual participation, recognition of student accomplishments, networking connections within the business community, and opportunities for leadership development. VSOs have a long history in the United States and are presumed to contribute to both the academic and life achievement of participants. Little research, however, is available to document the actual impact of VSOs on student outcomes.

Given the increasing calls for programmatic accountability, the need for research to determine the actual student outcomes associated with VSO participation became obvious. This study was designed to determine what, if any, research is available to document the proposed effects of VSO participation on student outcomes. The research question addressed by the study was as follows:

> What research and other data are available to document the effect of VSO participation on student outcomes, in terms of both academic achievement and achievement in other arenas?

This report is a result of a comprehensive review and synthesis of the research and professional literature regarding VSOs in particular and student organizations in general, with an emphasis on student outcomes. Extant databases were examined to determine the degree to which currently available resources could be used to examine the effects of VSOs on student achievement and the students' subsequent accomplishments as adults. The study used a modified qualitative research method that allowed for the review and synthesis of the literature and the identification of materials for inclusion as support

documentation. In addition, a survey designed to determine the state and federal levels of support provided for the operation of VSOs was developed and pilot tested.

A major assumption of the study was that pertinent documentation would be identifiable and obtainable for review and synthesis for inclusion in the report and that an adequate amount of information in terms of quality and quantity to allow for general conclusions would be obtainable during the literature review. The primary limitation of the study was that some documentation did not arrive in a timely manner for review, synthesis, and inclusion in the report given the time frame in which the study was conducted.

An overview of the legislative and practical definitions of vocational education and VSOs is followed by a synopsis of the history and objectives of the current twelve recognized secondary and postsecondary VSOs. A synopsis of the legislative acts and amendments that have affected VSOs is discussed as well. This report also includes a summary of the goals and aims of VSOs, which include the facilitation of youth development, the assimilation and practice of workplace skills, the provision of occupational choice exploration opportunities, and the promotion of leadership skills.

Although a large literature base on VSOs is available (in excess of 250 documents), an in-depth review and analysis of the applicable literature revealed only a limited amount of literature and research that documented or chronicled the impact of VSOs on student achievement. Much of the literature reviewed advocated benefits that (1) were not adequately verified in the reports, (2) were supported by limited or weak methodologies in areas of research and analysis, and (3) did not provide sufficient detailed explanation to support duplication of the results.

With the strong legislative guidance and support for vocational education provided through the 1998 Perkins Act, state programs designed to provide a trained workforce to meet the challenges of 21st century technology are in place. VSO programs are an integral part of state programs for vocational education. Their designation as cocurricular programs that provide youth development, workplace skills, and occupational choice exploration helps to meet the goals for expanded program criteria. Yet, adequate research to address the impact and benefits of VSOs is simply not available. The current legislation will require updates to the structure and implementation of vocational education programs with high

impact in the area of accountability. Current and follow-up accountability data are now required of states in the areas of attainment of academic and proficiency skills. This accountability is also extended to cover the areas of nontraditional training and employment.

It has been strongly recommended that research in the area of VSO impact, benefits, and assessments be conducted to identify strengths and weaknesses and provide baseline data. These recommended research efforts would facilitate the identification of benchmarks that would be useful for short- and long-range planning purposes. Accomplishment of these endeavors could be done through the use of comparative research across focus areas to identify corresponding benefits and impacts and facilitate implementation of adapted programs, including short- and long-range plans, to meet the needs as dictated by legislation and participant requirements. Collective research may also be used to provide overall status information for the growth and expansion of VSOs to meet the projected needs and requirements as dictated by the 1998 Perkins Act.

INTRODUCTION

A traditional and almost universally accepted component of career and technical education is the vocational student organization (VSO). VSOs such as Future Business Leaders of America (FBLA) and SkillsUSA-Vocational Industrial Clubs of America (VICA) are considered to be integral parts of each of the traditional service areas, particularly at the secondary level. These clubs are thought to be so much a part of the educational experience of vocational students that they are considered to be cocurricular rather than extracurricular in nature (Davis, 1987). In fact, VSOs are often times the driving forces of vocational education programs. As Hannah (1993) noted, "[O]nce a companion program—a nice extra activity for motivated students—VSOs today are writing curriculum packages for teachers to ensure that VSO activities are integrated with classroom material" (p. 21). The earliest VSO, Future Farmers of America (FFA), was founded nationally in 1928 (National FFA Organization, 1999), barely a decade after the Smith-Hughes Act. In more recent decades, national postsecondary VSOs have also been developed. Today, twelve VSOs are recognized by the U.S. Department of Education (see Table 1). These twelve national VSOs serve more than 1.5 million students (Cahill & Brady, 1996).

Background of the Problem

For many years, VSO advocates have argued that VSO participation provides numerous benefits for career and technical education students, teachers, and programs. Such authors have also conjectured that communities benefit from the participation, sponsoring, and support of these organizations. Benefits often mentioned include student motivation, opportunities for contextual participation, recognition of student accomplishments, networking connections with the business community, opportunities for leadership development (Bell, Clark, Gebo, & Lord, 1989; Davis, 1987; Fracaroli, 1988).

Certainly, one benefit that is often cited is that students who participate in VSOs tend to be more successful in school. This presumably means increased student academic achievement while in school as well as improved achievement after completion or otherwise leaving school. Thus, VSOs have a long history in this country and are presumed to contribute to academic and life achievement of participants. Nevertheless, little

current research is available to document the actual impact of VSOs on student outcomes, either short term or long term.

Table 1
Secondary and Postsecondary Vocational Student Organizations (VSOs)

Secondary VSOs	
BPA (Business Education)	FCCLA (Family and Consumer Studies)
DECA (Marketing Education)	HOSA (Health Education Occupations)
FBLA (Business Education)	National FFA Organization (Agricultural Education)
TSA (Technology Education)	SkillsUSA-VICA (Trade & Industrial Education)
Postsecondary VSOs	
BPA (Business Education)	PAS (Agricultural Education)
DEC (Marketing Education)	PBL (Business Education)

Purpose and Research Question

The purpose of the project was to examine the scope and effects of VSOs on student achievement. Because of the compressed time frame and the restricted nature of the study, our examination was limited to extant literature and data sources.

The research question addressed by the study was as follows:

What research and other data are available to document the effect of VSO participation on student outcomes, in terms of both academic achievement and achievement in other arenas?

Scope

This report is a result of a comprehensive review and synthesis of the research and professional literature regarding VSOs in particular and student organizations in general. In addition, extant databases were examined to determine the degree to which currently available resources could be brought to bear on the effects of VSOs on student achievement and the students' subsequent accomplishments as adults.

Assumptions and Limitations

Assumptions identified in this report included (1) pertinent documentation would be identifiable and obtainable for review and synthesis for inclusion in the report, (2) an adequate amount of information in terms of quality and quantity to allow for general conclusions would be obtainable during the literature review, and (3) participants selected for completion of the VSO State Directors Survey would respond in a timely manner.

Limitations of the study were (1) the time frame was limited to five months for the entire project; and (2) once documents were identified and requested, some did not arrive in a timely manner for review, synthesis, and inclusion in the report.

VOCATIONAL EDUCATION AND VOCATIONAL STUDENT ORGANIZATIONS

An overview of the legislative and practical definitions of vocational education and VSOs is provided in this section. The overview is followed by a synopsis of the history and objectives of the current twelve recognized secondary and postsecondary VSOs. Summaries of the current needs are also presented.

Vocational Education

Roy Peters, Jr. (1993), the Oklahoma Director of Vocational and Technical Education, in a presentation at the 1993 High Schools That Work Fall Forum, forwarded the opinion that vocational education is a major contributor to the national well-being and to the quality of life in the United States. In Gingchi's (1986) opinion, vocational education may include any education or training that is related to the work world, although a narrower definition is the specific training for a specific job. He believed, however, that one misconception is the view that vocational education only applies to manual skill training.

Gingchi (1986) referred to vocational education as a "comprehensive term referring to educational programs which involve the study of technologies and related sciences and the acquisition of practical skills and knowledge relating to occupations in various sectors of economic and social life" (p. 3). Previous definitions for vocational education are provided in the legislative acts and amendments that guide, govern, and regulate education. In 1917, the Smith-Hughes Act established federal support for vocational education in public secondary schools. This act also limited vocational education to agriculture, home economics, and the trade and industrial occupations. In 1928, the Federal Board of Vocational Education defined vocational education as . . .

> that form of education and training in any field of human activity which assists people, young or old, to get a job, to keep a job, to improve on a job, to get a better job, and to believe in their job. (p. 1)

In 1963, The Vocational Education Act defined vocational education in the following way:

> Vocational or technical training or retraining which is given in schools or classes under public supervision and control or under contract with State board or local educational agency, and is conducted as part of a program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicians in recognized occupations . . . but excluding any program to fit individuals for employment in occupations which . . . are generally considered professional or as requiring a baccalaureate or higher degree.

The Vocational Education Amendments of 1968 assigned a high priority on vocational education as a means for meeting the nation's demands for labor and increasing economic opportunities for the disadvantaged and handicapped (Gingchi, 1986). Additional amendments signed into effect in 1974 broadened the definition for vocational education. The term "sub-professionals" was added to "workers or technicians," which increased the employment levels to which vocational education could train individuals. These amendments also added "and in new and emerging occupations" after "recognized occupations." The purpose was to encourage the development of programs suitable for meeting future labor market needs (p. 5). Additional amendments were passed in 1976 that moved the definition of vocational education from the previous narrow focus:

> Vocational education—organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree.

According to Taylor (1982), vocational education has assumed the key role of preparing skilled workers to meet the nation's workforce demand. The 1998 Carl D. Perkins Act granted local districts and states more flexibility in developing programs (Hettinger, 1999; Hoachlander & Klein, 1999). The signing of the act provided vocational education with separate authorizing legislation. The responsibility for overseeing vocational education rests with the education authorities and not with the state governors or labor officials. Hettinger (1999) reported that the 1998 Perkins Act also provided separate authorization for technology preparation and increased the requirement for student achievement accountability. The act also created a 10% reserve of local funding for rural and urban areas or regions adversely affected by changes in the secondary within-state formula (Hoachlander & Klein, 1999).

Vocational Student Organizations (VSOs)

VSOs have been recognized historically as a vital component of vocational education (Neumeyer, 1997). Appendix A outlines a number of important historical milestones in the development of VSOs in this country. National legislators have supported their contribution. Although the 1917 Smith-Hughes Act did not specifically recognize VSOs, funding for advising and supervising VSOs by agricultural instructors was available under the legislation (Vaughn, Vaughn, & Vaughn, 1993). The following successive legislation passed over the next three decades is often referred to as the "George Acts":

- 1929, George-Reed Act
- 1934, George-Ellzy Act
- 1936, George-Dean Act
- 1946, George-Barden Act (Neumeyer, 1997; Vaughn et al., 1993)

The George-Barden Act named VSOs specifically in legislation, and designated funds for VSO-related activities (Neumeyer, 1997). In 1950, Public Law 81-740 was the first and only law to federally grant a charter to a VSO, Future Farmers of America (FFA), establishing a relationship between a VSO and an instructional program (Neumeyer, 1997; Vaughn et al., 1993). After the charter of the FFA, the importance of VSOs was recognized as integral components of education programs. The importance of VSOs to classroom instruction was affirmed with The Vocational Education Act of 1963, and the subsequent amendments of 1968 and 1976. In 1984, the Carl D. Perkins Vocational Education Act established the use of federal funds for VSOs, and additional authorizations in 1990 and 1996 continued the provisions set forth in the 1963 Vocational Education Act (Neumeyer, 1997).

History and Objectives of VSOs

To facilitate youth development, VSOs are integrated into classroom curriculum and are often in competition with extracurricular activities (Vickers, 1994). Vickers reported that the basic philosophy of VSOs is to "provide a vehicle for individual improvement through organizational activities" (p. 43). VSOs have served as positive organizations that provide students with the opportunities to develop leadership skills and promote initiative and enthusiasm. VSOs were formed to help provide students with more

than basic job skills. The goals of VSOs include providing students with a way to explore interest in occupational fields while refining and learning leadership, social, and citizenship skills (Cahill & Brady, 1996; Davis, 1987; Harris & Sweet, 1981; White, 1982). Davis (1987) also noted that "students learn to assimilate and practice skills that would not specifically be taught in other school classes or activities" (p. 33). According to Fracaroli (1988), the hope is that "VSOs can bridge the gap between classroom instruction and the world of work in business and industry for students and their teachers/advisors" (p. 23). McComas (1985) contended that one VSO—DECA—can "serve as a stimulus for students because appropriate incentives (such as competitive events) are followed by productivity" (p. 12). McComas also noted that because of this philosophy, the work of teachers is made easier. White (1982) identified common aims and goals that VSOs espouse (see Table 2).

Table 2
Common Aims and Goals of VSOs

- To develop competent, aggressive leadership.
- To strengthen the confidence of young men and women, in themselves and in their work.
- To create more interest and understanding in the intelligent selection of occupational choices.
- To encourage members to improve their home, school, and community.
- To encourage members in the development of individual projects and in establishing themselves in a business of their own.
- To develop character, train for useful citizenship, and foster patriotism.
- To offer opportunities for participation in cooperative effort.
- To encourage thrift.
- To encourage improvement in scholarship.
- To encourage the development of organized recreational activities.
- To encourage participation in worthy undertakings which will improve vocational education in various fields.
- To promote international goodwill and understanding.

Source: White (1982), p. 14

The history of organized national VSOs began in 1917 when President Woodrow Wilson signed the first national vocational education act into law. Among other things, the act created federally supported, state-run programs of vocational education (FHA/HERO, 1999). The act authorized funds for home economics, trade and industrial, and agriculture programs (Hannah, 1993). According to White (1982), the first national VSO was Future Farmers of America (FFA) founded in 1928 in Kansas City, Missouri. The second national VSO was Future Homemakers of America (FHA) and the New Homemakers of America (for blacks), both were organized in Chicago, Illinois, in 1945. In 1965, the two groups merged under the name of Future Homemakers of America (FHA). In 1971, Home Economics and Related Occupations (HERO) was formed as a part of FHA. In 1947, the Distributive Education Clubs of America (DECA) was formed in Memphis, Tennessee, and the year 1965 saw the formation of the Vocational Industrial Clubs of America (VICA) in Nashville, Tennessee. Office Education Association (OEA) was founded in Greene Lakes, Wisconsin, in 1966. Many chapters of OEA began at the local level and later merged to form state associations.

In 1974, VSOs were recognized as integral parts of the vocational curriculum by the U.S. Office of Education (currently the U.S. Department of Education) (White, 1982, p. 13). A 1976 amendment to the 1963 Vocational Education Act allowed states to use funds for VSOs provided they were part of the curriculum and approved in the state's five-year plan and annual program (Wonser & Kohns, 1979, as cited in White, 1982). Each of the nationally recognized VSOs holds local, regional, and national conferences at which competitive contests in a wide variety of activities are conducted. Most VSOs also publish materials for student use (Evans, 1975).

Current Policy Regarding Vocational Student Organizations

The current policy of the U.S. Department of Education is consistent with previous administration policies and with the legislation noted previously. In 1999, Secretary Riley promulgated an official policy statement as reproduced on the following page.

NCRVE, MDS-1317

Policy of the United States Department of Education For Career and Technical Student Organizations

The United States Department of Education maintains a close relationship with ten career and technical student organizations and welcomes their cooperation and support in strengthening programs of vocational and technical education. Recognizing that the past performance and future potential of these ten organizations are compatible with the overall purposes and objectives of education today, the United States Department of Education strongly endorses their objectives and seeks to involve their thinking in the improvement of vocational and technical education.

In view of this, these policies represent the position of the United States Department of Education:

1. The United States Department of Education recognizes the educational programs and philosophies embraced by the following career and technical student organizations as being an integral part of vocational and technical education instructional programs:

Business Professionals of America
National DECA
Future Business Leaders of America-Phi Beta Lambda
National FFA Organization
Family, Career and Community Leaders of America
Health Occupations Students of America
National Postsecondary Agricultural Student Organization
National Young Farmer Educational Association
Technology Student Association
SkillsUSA-VICA

2. The United States Department of Education recognizes the concept of total student development as being necessary for all vocational and technical education students to assume successful roles in society and to enter the labor market.

3. The United States Department of Education will facilitate technical and supportive services to assist career and technical student organizations through State agencies in their efforts to improve the quality and relevance of instruction, develop student leadership, enhance citizenship responsibilities, overcome sex and race discrimination and stereotyping, and serve students of special populations, especially with respect to efforts to increase the participation of students who are members of special populations.

4. The United States Department of Education recognizes the responsibility for vocational and technical instructional programs and related activities, including career and technical student organizations, rests with the State and local education agencies.

5. The United States Department of Education approves of Federal and State grant funds for vocational and technical education to be used by the States to give leadership and support to these career and technical student organizations and activities directly related to established vocational and technical education instructional programs at all levels under provisions of approved State plans for vocational and technical education.

Efforts on the part of State and local education agencies to recognize and encourage the growth and development of these career and technical student organizations are highly important and deserve the support of all leaders in American Education.

Dick Riley

Richard W. Riley
Secretary of Education

Patricia W. McNeil

Patricia W. McNeil
Assistant Secretary for
Vocational and Adult Education

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Secondary and Postsecondary VSOs

VSOs, with their extensive goals of career and leadership development, motivation, and recognition opportunities, may be applicable to a variety of development levels. These levels range from middle school through postsecondary, adult, and even college programs with vocational foci. This research report addresses the VSOs at the secondary and postsecondary levels. Secondary organizations are defined as public or private academic, vocational, or general programs for 9th through 12th grades. Nevertheless, several VSOs provide extensive programs for participation of middle school students, typically in 6th through 8th grades but occasionally ranging as low as 5th grade or as high as 9th grade. Postsecondary VSOs are also available for students enrolled in continuing education or training after or beyond the high school level. This term or concept may also refer to training programs or academic programs that may or may not result in certification or baccalaureate degrees.

VSOs are available in business, marketing, agriculture, family and consumer studies, trade and industrial, and health occupations education. These organizations have been developed to tailor appropriate activities for each program area. The purpose of specialized organizations is to provide the greatest benefit for student participants by fostering interests and by providing pertinent and realistic liaisons with appropriate and applicable companies and industry partners.

Business Professionals of America (BPA)

BPA serves as a contributor by advancing leadership, citizenship, academic, and technological skills in the preparation of a world-class workforce (BPA, 1995). The need for a student organization that served postsecondary vocational office program students was recognized in 1963. After research conducted by the American Vocational Association (AVA) in 1964 indicated there was a need for such a student organization, Vocational Office Education Clubs of America (VOECA) was formed in July 1966. Articles of incorporation were filed for the Office Education Association (OEA) in Wisconsin in August 1966 for the implementation and development of a student organization. Liaisons with business and industry were maintained to provide emerging technology guidance through the Board of Trustees and the National Business Advisory Council (NBAC). Additional advisory councils were established to serve as liaisons between the Board of Trustees and chapter advisors (e.g., Classroom Educators Advisory Council [CEAC]) and

state associations (e.g., State Association of Advisory Council [SAAC]). A strategic long-range marketing plan for the organization, based on a three-year marketing research project, was adopted in 1985. This marketing plan included a name change, new logo, emblem, and colors. The new image for BPA was revealed in July of 1988. The four basic secondary and postsecondary goals that can be achieved through participation in BPA include (1) leadership, (2) teamwork, (3) business knowledge, and (4) confidence (Bayless, 1991; BPA, 1995).

DECA (formerly Distributive Education Clubs of America) and Delta Epsilon Chi (DEC)

DECA is the VSO for the secondary-level marketing education program. Working hand-in-hand with the education and business communities, this cocurricular VSO now has more than 180,000 members (DECA, 1999). DECA was incorporated in October 1946. In 1948, after 17 charter member states approved the first constitution, the club was initiated officially as an organization, adopting the name Distributors Club of America. The club name was changed to DECA when it was officially recognized by AVA (Hephner, 1980). The mission of the club is to enhance the cocurricular education of students interested in marketing, management, and entrepreneurship. The club does this through teaching and providing opportunities for members to practice leadership skills, social and business etiquette, occupational competencies, ethical behavior, civic responsibility, and the role of free enterprise in the global economy (DECA, 1999). Corbin (1977) agreed, indicating that top goals of DECA are the development of leadership skills, self-confidence/self-acceptance, a greater understanding of a free enterprise system, and occupational competencies needed for careers in marketing, merchandising, and management.

DEC is a national college organization for future marketing, management, merchandising, and entrepreneurial professionals (DECA, 1999). DEC has local chapters and state associations that function as a division of the National DECA Organization. DEC offers to members the following opportunities:

- State and national recognition
- Awards and recognition for outstanding marketing, merchandising, management, and entrepreneurial skills
- Leadership opportunities at local, state, and national levels

- Special activities and competition guides
- Business networking chapter guides
- Individual and group competitions
- Opportunities to work and learn from people with similar career interests (DECA, 1999)

Family, Career, and Community Leaders of America (FCCLA)

The origins of clubs for home economics students dates back to 1917 when President Wilson signed the first national vocational education act into law. The establishment of vocational home economics education laid the foundation for the development of FHA as an integral part of its programs (FHA/HERO, 1999). Barlow (1986) noted that the first state-run organizations for home economics students were then established as early as 1920. In 1945, a temporary constitution was drawn up and the proposed name offered for the organization was Future Homemakers of America (FHA/HERO, 1999). During the 1960s, the name was changed to incorporate Home Economics Related Organization (HERO) in order to include students enrolled in job-training programs which were considered nontraditional for the home economics field at the time, making the organization's name FHA/HERO for many years. FHA/HERO issued a news release in July 1999 to formally announce the organization's latest name change to Family, Career, and Community Leaders of America (FCCLA). The name FCCLA was selected to better communicate the current areas of focus by the organization. These areas include "financial management, career planning, the act of balancing family and career, leadership development, and community service" (FHA/HERO, October 2, 1999).

FCCLA is one of the nation's largest VSOs, with over 215,000 members, and is the only organization of its kind with the family as the core focus (Bowers, 1982; Vickers, 1994). The following statements summarize the purposes of FCCLA:

- To provide opportunities for self-development and preparation for family and community living and for employment.
- To strengthen the function of the family and community.
- To encourage democracy through cooperative action in the home and community.
- To encourage individual and group involvement in helping to achieve worldwide brotherhood.

- To institute programs promoting greater understanding between youths and adults.
- To provide opportunities for decisionmaking and for assuming responsibility.
- To become aware of the multiple roles of men and women in today's society.
- To develop an interest in home economics, home economics careers, and related occupations. (Frick, 1980)

Some of the member benefits of FCCLA include education through real-world experiences; the development of decisionmaking, creative, and critical thinking skills; the improvement of personal and family relationships; the ability to identify and solve practical problems; the improvement of communication skills; the building of self-esteem; the development of leadership skills; and the ability to cooperate and to work as a team (FHA/HERO, 1999).

The FCCLA structure includes provision for participation of members at local, state, and national levels. FCCLA chapters are fostered at locations that teach consumer and homemaking/work and family life classes, while HERO chapters are at locations that offer job-training programs (Vickers, 1994).

Future Business Leaders of America (FBLA)-Phi Beta Lambda (PBL)

FBLA has existed since just before World War II. Dr. Hamden L. Forkner of Columbia University developed the concept in 1937. It was not until late 1940, however, when official sponsorship of FBLA was accepted by the National Council for Business Education (FBLA-PBL, 1999). FBLA was formed because of a need for a national organization for all of the business clubs in the nation's high schools (Ladd & Ruby, 1997). Today, there are more than 240,000 active members in more than 13,000 chartered chapters across the nation and beyond. FBLA members learn about business careers; establish occupational goals; get firsthand experience with business people; practice effective money management; learn the value of community responsibility; and get on-the-job training in a wide variety of business activities, such as planning, fundraising, conducting meetings, and managing finances, time, and resources (FBLA-PBL, 1999). Fracaroli (1988) suggested that "the purpose of FBLA-PBL was to bring business and education together in a positive working relationship. Its programs and services on all of the various levels help create a forum in which students, educators, and business people learn about one another. [It] develops vocational and career-supportive competencies while

promoting civic and personal responsibilities" (p. 23). Gorecki and Hettie (1992) reported that "leadership activities" remain the cornerstone of FBLA and PBL programs.

PBL is a national business education fraternity with over 15,000 members with over 600 chapters nationwide (FBLA-PBL, 1999). PBL helps to prepare postsecondary students for business, entrepreneurial, and business-related careers. PBL is the college-level division of FBLA-PBL, Inc. FBLA-PBL serves at the following education levels:

- Middle school (e.g., middle level)
- High school (e.g., FBLA)
- Postsecondary
- Professionals and educators (e.g., professional) (FBLA-PBL, 1999)

National FFA Organization (formerly Future Farmers of America)

The first national VSO was established in 1928 in Kansas City, Missouri, for students in agricultural education. At this time, it was determined that the organization would be identified as Future Farmers of America (Barlow, 1986). The organization was chartered in 1950 with the passage of Public Law 81-740 (Neumeyer, 1997). In 1965, the organization merged with the New Farmers of America, which was the black student organization. The first females were officially accepted into the organization in 1969. At the National FFA Convention of 1988, student delegates changed the organization name to National FFA Organization (National FFA Organization, 1996). Today, there are over 449,000 members from 7,241 chapters across the United States. Benefits claimed by members through FFA include leadership, self-esteem, and preparation for career success (National FFA Organization, 1999).

To accommodate the desire by postsecondary students to continue receiving similar benefits as they did through their participation in the National FFA Organization, the Postsecondary Agricultural Students (PAS) organization was formed.

Health Occupations Student Organization (HOSA)

One of the youngest of the current vocational student organizations, HOSA has been in existence only since 1976. By school year 1993-1994, 60,000 members belonged to HOSA through 33 affiliated state associations (TELEPORT, 1999). HOSA provides an

effective program of leadership development, motivation, and recognition for secondary, postsecondary, and collegiate students enrolled in Health Occupations Education (HOE) classes. The HOE-HOSA Partnership provides students with training that exceeds the basic technical skills needed for entry into the health care field (TELEPORT, 1999).

Technology Students Association (TSA)

TSA was established in 1965 under the name American Industrial Arts Student Association (AIASA). The organization was officially incorporated and recognized by AVA in 1978. It was not until 1986 that the VSO's name was changed to TSA. This change occurred when the service area changed its name to Technology Education from Industrial Arts (Barlow, 1986). The official objectives of TSA are as follows:

- To promote membership for everyone who meets the eligibility criteria and to provide related services to all those members.
- To develop TSA products and services that support and complement instructional programs for teaching technology.
- To increase public awareness and support of the programs, activities, and services of the Technology Student Association.
- To enhance the cost effectiveness of operations and seek increased revenues.
- To implement "continuous improvement" strategies throughout the organization. (TSA, 1999)

SkillsUSA-Vocational Industrial Clubs of America (VICA)

The establishment of a national organization for trade and industrial education students was attempted in 1936, but that effort failed (Barlow, 1986). In 1965, VICA was established to improve the quality of vocational education, to promote national recognition for the accomplishments of vocational students, and to upgrade vocational programs. It was formed at the suggestion of U.S. Department of Education staff members, labor leaders, and state vocational education leaders. Its leaders, among other things, wanted programs that would augment the education program and help raise program standards (Luchsinger, 1992). SkillsUSA-VICA now has 240,000 high school and college students and professional members who are enrolled in training programs in technical, skilled, and service occupations. With approximately 15,000 educators and over 1,000 corporations, trade associations, and labor unions supporting SkillsUSA-VICA, extensive partnerships

are in place to provide guidance and expertise into the 21st century. SkillsUSA-VICA's Total Quality Curriculum emphasizes competencies and workplace basic skills in line with the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS) and industry standards for the Quality at Work program. SkillsUSA-VICA has a postsecondary level, which in conjunction with the secondary level, participates in the Professional Development Program. This program is a self-paced curriculum for effective communication, teamwork, networking, workplace ethics, and more (SkillsUSA-VICA, 1999).

Current and Future Needs for Vocational Education and VSOs

An increase in the number of students enrolled in job training programs through the year 2000 was predicted at the end of the 1980s. This increase was predicated on the expectation that there will be inadequate numbers of well-trained workers for the U.S. labor force (Carnevale & Gainer, 1989, cited in Shank, 1992). Husain (1999) argued that it would be difficult to draw trends when enrollment definitions vary from state-to-state. With a more accurate picture of vocational education enrollment trends, a stronger argument might be made for funding and support.

With the signing of the Carl D. Perkins Act of 1998, major changes were enacted that impact the structure and implementation of vocational education programs. There were major changes mandated in the area of accountability (Hettinger, 1999; Hoachlander & Klein, 1999). States are required to provide accountability data for the impact of vocational education. Follow-up accountability data will also be required for student attainment of vocational, technical, and academic skill proficiencies. This accountability requirement also extends to the reporting of acquisition of secondary and postsecondary degrees or credentials, placement and retention in postsecondary education, or employment. Accountability is also required to document the development of vocational and technical programs that encourage and lead to nontraditional training and employment. This obligation is applied to programs and areas in which there are participation levels of less than 25% of a particular gender. States will be required to report performance levels in percentages and to utilize common language to facilitate state-by-state comparisons. These comparisons will be prepared on a yearly basis and may affect funding allocations.

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Changes or updates to the technological preparation aspects of vocational education make the use of long-range plans by the consortium a necessity. These plans must contain development and implementation plans for five years. The emphasis of these plans must be on technology, and they must support the creation of technology preparation learning sites at the community college level.

The 1998 Perkins Act includes a clause that precludes the use of Perkins funds for school-to-work activities. The School-to-Work program is "an educational reform effort combining academic achievement with a graduated understanding of the world of work" (National School-to-Work Office, 1996, as cited in White, 1997, p. 7).

While the requirement to address gender inequity is contained in Perkins, the act calls for the reduction of activities but does put forth the guidelines for allocation of funds for leadership funding of nontraditional training and employment efforts. In an effort to more efficiently and effectively provide vocational education in the appropriate manner to those who would benefit the most, the 1998 Perkins Act removes the disability enrollment quota. This change allows for increased flexibility, and initiates the requirement for tracking of students with diplomas and those participating in continuing education. The states are also required to identify and describe how these populations of students are being served.

In 1993, the Southern Regional Education Board (SREB) (1993, 1999), an interstate education compact of sixteen states, proposed guiding principles for the review and development of vocational programs at the secondary level. The goals proposed by SREB (1993) were to refocus the vocational curriculum to meet the high-skill, high-wage workforce demands for workers in the 21st century. In order to accomplish these goals, the following must be achieved:

- Intellectual skills for symbols and abstract thought instead of physical responses
- Knowledge of varied technology and information systems
- Participation in extended training programs for broad industry, business, or trade fields lasting four to six years, including postsecondary instruction and/or work-site learning
- Workplace-related study with access to a full range of modern technology
- Programs developed with initial and continued professional and technical involvement

- Access to organized programs with broad outcomes

SREB, however, does not currently address the role of VSOs in their High Schools That Work program (M. Johnson, personal communication, October 30, 1999).

Summary

The importance of vocational education to the U.S. workforce is so strong that it is protected and guided by federal legislation. The 1998 Perkins Act requires the increased accountability of achievement and impact in the areas of vocational education and facilitates the building of the 21st century workforce. The act grants the right of flexibility in the state's task of building programs that meet the needs of the growing and changing U.S. workforce with a special emphasis on technology preparation.

VSOs are time-honored programs that have grown and expanded since Woodrow Wilson signed the first vocational education act into law in 1917. Since that time, the vocational education focus has expanded beyond home economics, trades and industry, and agriculture to include an ever-widening array of workforce and career preparation programs. VSOs now have the distinction of being recognized as integral parts of the vocational curriculum (White, 1982). The generally accepted goals and aims of VSOs include facilitation of youth development, assimilation and practice of workplace skills, occupational choice exploration, and promotion of leadership.

Secondary and postsecondary VSOs address program area needs for different levels of study and education while maintaining consistent standards and goals. The recognized postsecondary VSOs are higher-level structures developed under secondary-level VSOs in the areas of business (BPA, FBLA, and PBL), marketing (DECA and DEC), and agriculture (National FFA Organization and PAS).

The High Schools That Work program proposed by SREB in 1993 provides a proposition for refocusing the vocational curriculum for 21st century demands; however, SREB does not address VSOs in their proposed new high school.

METHODOLOGY

The methodology used in this study was a modified qualitative research method that allowed for the review and synthesis of documentation for inclusion as support documentation in the report (Creswell, 1994). In addition, a survey was developed, pilot tested, and distributed. The completed survey was distributed to a random sample drawn from the 50 state VSO directors.

Design

The research design consisted of an exhaustive review of the current literature regarding VSOs. Background on VSOs in general and on specific VSOs were looked at in terms of their history, goals, and benefits to students. The literature review was conducted to see how VSOs impacted achievement through assessing impact and outcomes, benefits, research statistics, and applicable factors.

Procedures

Applicable citations identified through library catalogue databases and on-line database searches were downloaded to diskette for printing. Initial citations were reviewed for pertinence to research goals. Full documents of citations determined applicable for possible inclusion in the report were requested from appropriate lending departments and organizations. A complete review was conducted on each potential document designated for inclusion in the report as support documentation or research literature. Those documents not designated as support documentation are listed in an annotated bibliography (refer to Appendix C).

The following are the databases, online services, and periodicals that were examined through this literature review:

- WorldCat (On-Line Computer Library Center [OCLC] FirstSearch) Database for published books and reports
- The World Wide Web for combined VSO website locations and individual VSO website locations

- FirstSearch Database for periodicals, journals, and reports on current legislation, laws, VSOs in general, and specific VSOs
- InfoTrac Database for periodical and article reviews on VSOs
- Ovid On-Line System Database for published books and reports on VSOs
- Subject Resource Pages Database for publications on VSOs
- Electronic Journals Database for published books and reports on VSOs
- VT Electronic Dissertations and Abstracts Database for VT dissertations and theses on VSOs
- ERIC ED and EDRS Databases for published books and reports on VSOs
- NetFirst OCLC Database of Internet sources on VSOs
- Education Abstracts Database for leading publications in field of education on VSOs
- JSTOR Database for on-line scholarly journals on VSOs
- Electronic Collections On-Line Database for periodicals and reports
- Dissertation Abstracts Database for dissertations and theses on a national level
- Government Printing Office (GPO) Catalog Database for published books and reports
- Library of Congress Database search for dissertations/theses and general on-line catalogue database for VSO documentation

Over 250 sources were reviewed for applicability to this VSO project report. Over 50 of these sources were designated as support documentation and have been identified within this report. These sources were reviewed and analyzed for citation in the literature review and inclusion in the annotated bibliography that is included as Appendix C.

Pilot Survey for VSO State Directors

An issue suggested by the research question of this study and by the initial literature review was to determine the level of support being provided by states for their VSOs. It became clear early in our efforts that if one would ask for the results of a given effort, then the magnitude of the effort should also be determined. In an attempt to begin a process that would facilitate the collection of such data, a mail survey was generated for distribution to VSO state directors. The content of the survey was adapted from a survey created and distributed by Collins (1977). Collins' survey was used to collect data on state sanctioned

VSOs, administration policies for sanctioned VSOs, course credit information, advisor compensation, and state funding contributions. The first draft survey was distributed to the Virginia Department of Education, Virginia FFA Office, and Virginia Vocational Curriculum and Resource Center for validation and for field testing. Comments and responses received from the pilot test were used to refine and update the draft survey. The revised survey was formatted for distribution to the selected sample.

To record information on response and the completed distribution process, communication logs were used to document survey distribution activities. The communication process employed was adapted from Owens (1992). Owens' method/format for documenting the process for presentation of response rate information is useful. A purposeful selection of 25 state directors of VSOs was identified and copies of the mail survey were mailed to them. The original population profile was presented with identification of selection criteria and context methods used for selection. Adjusted population information was presented, followed by the adjusted sample response rates and the communication efforts (i.e., nonreachable, wrong number) employed. The high response rate of 93% is attributed to the use of prenotification correspondence, survey distribution, follow-up telephone communications, and callbacks by the researcher. The short time frame of the study made additional follow-up impossible. Because this was a pilot study, the results are not included as a part of this report. The survey, however, is presented as Appendix B, and the recommendations included at the end of the report suggest the use of this, or some other instrument, to gather data from the states on their level of support for VSOs.

REVIEW AND SYNTHESIS OF LITERATURE

This section contains a review and synthesis of the professional and research literature pertaining to student organizations in general and to VSOs in particular, with an emphasis on student outcomes. A number of documents were identified for potential relevance to the goal of documenting the impact of VSOs; however, almost all of the items identified and reviewed merely reported personal perceptions of participants and supporters of VSOs rather than the actual impact of the organizations, and any evidence was generally in anecdotal form. Only a very limited number of relevant research studies that documented the subject using either qualitative or quantitative research methods could be found.

This report also excludes findings related to student organizations that are not considered cocurricular. The expressed purpose of this report was to explore, collect, and report on professional and research literature that addresses the issues of impact, achievement, and benefits of VSOs at the secondary and postsecondary levels.

Assessing Impact and Outcomes

Townsend and Carter (1981) conducted a study in which a sample cluster technique was used to collect 426 responses from 54 randomly selected high schools. From the two administered instruments—the Personal Development Inventory and the FFA Activity Participation Inventory—which were used to solicit participants' self-perceptions in ten different areas, it was determined that participation had a significant relationship with leadership ($p = <.05$), while citizenship and cooperation revealed no significant relationships to participation. Townsend and Carter reported that "it cannot be concluded that the FFA activity participation caused higher leadership scores, but the positive relationship suggests the leadership trait is enhanced with FFA activity. Citizenship and cooperation, on the other hand, were not found to be related to the students' FFA participation" (p. 21).

Bowers (1982) completed a study that provided descriptive data on FHA participation activities. A total of 113 state advisers, vocational directors, and home economics teachers participated in the study by completing a self-administered

questionnaire. Bowers collected data pertaining to interest levels, incentive groups, participating groups, activity identification, audience, evaluation and administration, value statements, and desired action. Data were analyzed using the Pearson Product Moment Correlation test to identify significant correlation between membership, enrollment, and participation activities. Significant correlations were identified for the following areas:

- Interest in proficiency events and recognition activities
- Interest in proficiency events and skill events
- Total membership and total enrollment
- FHA membership and consumer and homemaking enrollment
- HERO membership and consumer and homemaking enrollment
- Total enrollment and interest in proficiency events
- Consumer and homemaking enrollment and interest in proficiency events

Bowers (1982) summarized that organizational activities can motivate student enrollment in vocational programs. Bowers also recommended the following:

- National input and resources for development of participation activities
- National philosophy be updated to reflect organizational growth potential
- Awards and recognition be utilized to promote membership
- Participation activities be developed that support member needs and support state and national philosophies and goals
- State directors of vocational education be included in future research

White (1982) completed a study that investigated the significance of leadership categories for five VSOs in Ohio. The following leadership categories were examined:

- Administrative abilities
- Affective traits
- Communication skills
- Evaluation capabilities
- Goal orientation
- Group commitment
- Personal characteristics
- Persuasive competence
- Vocational interest

Data were collected from 276 participants via a self-administered survey instrument. White's (1982) sample was drawn from advisors and chapter presidents of the following VSOs from the school year 1981-1982: (1) DECA, (2) FFA, (3) FHA/HERO, (4) OEA, and (5) VICA. The instrument was composed of 98 leadership skill examples. Participants were directed to rank level of opportunity using a 6-point, Likert-type scale (i.e., "no opportunity exists" to "almost always an opportunity exists"). Multivariate analysis of variance (MANOVA) statistical analysis along with Duncan's multiple range tests were used to identify significant differences among VSOs.

White (1982) reported that for the administrative abilities category, FFA was significantly different from VICA and OEA. For communication skills, FFA and VICA were significantly different from FHA/HERO and OEA. FFA was recorded as significantly different from FHA/HERO and OEA in the group commitment category. White found that FFA was significantly different from all other VSOs for the vocational interest category. OEA was significantly different from all other VSOs for the following categories: (1) administrative skills, (2) affective traits, (3) communication skills, and (4) evaluation capabilities category, while no significant difference was recorded for the goal orientation category.

This study actually measured the perceptions of chapter presidents and advisors of leadership category opportunities. White (1982) used the data to define importance levels of leadership categories for the investigated VSOs. No interval or ratio data were collected to document the frequency of leadership category opportunities.

Gingchi (1986) used the HS&B 1980/1982 survey data to identify and document the contributive effects of vocational education and other factors to post high school activities of public high school students. The completion of this *ex post facto* research facilitated the generation of a causal model using path analysis for the determination of significant direct and indirect effects. Gingchi reported that vocational education participation was a weak predictor for post high school activities. Vocational education did not significantly increase or decrease the chances that students would be unemployed, employable, homemakers, or in military service. General forms of activities (e.g., work, vocational education, vocational) which did not prelude participation in more than one activity were reported as weak (R^2<.10). Gingchi reported significant indirect effects for enrollment in strictly specified activities (e.g., work only, vocational education only,

vocational only). Participation in vocational education did not directly increase or decrease the chance that students would simultaneously work and study at the post high school level. Gingchi also reported that enrollment in vocational education produced significant negative direct effects for occupational aspirations and educational plans. Gingchi reported that study results provide no casual indications for lower occupational aspirations and educational plans.

Gingchi (1986) recommended that causal research be conducted for the lack of affect of vocational education participation on certain types of vocational activities. Gingchi also recommended expanded causal model research to substantiate the 1986 study, and that the long-term effects be explored as well. The employment of specific new datasets that control for uncontrolled defects and the exploration of vocational education's effect on post high school activities from the local and state levels were also recommended.

Brannon, Holloway, and Key (1988) completed a Western Region Impact Study that explored the effect of vocational agriculture programs on community leadership. The self-administered, two-part questionnaire in the study was adapted from the Western Region Impact Study. A total of 369 participants completed the questionnaire. The questionnaire was used to collect data on community involvement, scope of involvement, and intensity of involvement. Data analysis included the use of descriptive statistics to quantify the data. A t-test with an alpha level of .05 was used to compare participant and nonparticipant scores. Cronbach's alpha was used to measure the internal consistency of eight scales identified for community involvement.

The following background characteristics were recorded for the participants in the Brannon et al. (1988) study: (1) 46.5 mean age and 44 median age; (2) 89% were male; (3) 98% were white; (4) 60% had B.S., while 12% had some college and 12 years of education; and (5) 28% were in business, 17% agriculture, 14% education, 10% professional and in government, and 43% had agriculture interests. Brannon et al. reported an impact on community leadership success, with close to half of the participants (n = 162, 44%) in vocational agriculture/FFA. Those participants were generally residing in the same communities and participated in vocational agriculture (70%) for four years and FFA (67%) for four years. Participants also received advanced degrees and were active chapter members. Data recorded for chapter participation included the following: (1) chapter officers (71%), (2) judging (84%), (3) fairs and shows (82%), (4) community banquet

(77%), (5) committee work (59%), (6) parliamentary procedures (58%), and (7) state conventions (54%). The mean rating for contributive factors to community leadership success, on a 1 to 5 scale (i.e., 1 = None, 5 = Great), was 3.98 for vocational agriculture/FFA participants. For this group, Brannon et al. found that 17% reported 5 ("Great" impact level) and 16% reported 4 ("Much" impact level). For the nonvocational agriculture/FFA participants 20% reported that they had contributed 2 (Little), 3 (Some), 4 (Much), or 5 (Great) to community leadership success through participation (e.g., judges, award sponsors, advisory committee). Brannon et al. also reported significantly different (higher) participation levels by vocational agricultural/FFA participants in community affairs, school organizations, church, agricultural, and educational groups. The authors recommended continued publicizing of vocational agriculture/FFA benefits and stressed expanding leadership development programs and the continued involvement of community leaders with program participants.

Coleman (1993) reported the results of a one-person case study. The researcher reported that the case study participant felt that he had benefited greatly from his VSO (SkillsUSA-VICA) because he was able to repeatedly test his knowledge and skills against others in the same field across the nation.

Shank (1992) completed a study to describe nontraditional adult students in Ohio who were participating in full-time occupationally specific vocational training programs. Shank also developed a dropout prediction model of these students that was based on independent variables from the Conceptual Persistence in Postsecondary Vocational Education Programs by Johnson (1991).

Shank (1992) used an *ex post facto* static group for the study. Data were collected using descriptive survey questionnaire methodology. Shank obtained a 74% response rate using a mailed, self-administered questionnaire to 376 participants in 26 randomly selected adult vocational education programs in the state. Descriptive statistics were used to summarize and describe the data. Discriminate analysis was used to develop the prediction model for attrition rates. Point biserial correlation with a completion status variable was used to select variables for inclusion in the discriminate variable. Shank identified eight variables as significant for prediction of attrition rates: (1) course/schedule, (2) finances/ employment, (3) outside agency support, (4) instructor abilities, (5) physical disability, (6) interpersonal relationships, (7) academic ability/habits, and (8) family responsibilities.

Shank's prediction model accounted for 22% of the variance in attrition rates with 75% of the completers and 79% of the dropouts correctly classified.

The following was the reported profile for the average student: (1) white female, (2) approximately 35 years of age, (3) two-in-three chance of being married, and (4) probably receives outside agency support (e.g., Pell Grant or JTPA funding) for training program (Shank, 1992). Shank also reported that the participant was probably unemployed, had a one-in-three chance of being on welfare, was an hourly wage earner prior to program enrollment, and probably had a high school diploma or less. The total household income was more than likely less than $10,000. The profile also indicated that there was a 17% dropout rate, and that the average student would attribute dropping out to too many responsibilities, not enough money, conflict between work and school, teacher dissatisfaction, and not liking the instructor. The profiled participant also had a 29% chance of having a disability.

Shank (1992) prepared a detailed list of recommendations with explanations for refining postsecondary education vocational training programs. The list of recommendations included improved methods for collecting, reporting, and organizing information about vocational students. The author contended that implementation of these improvements would be helpful by providing baseline data and identifying trends and needs at the postsecondary level. Such research of improved student assessment of abilities, interests, and needs would help with the proper placement of students. Collection of student personal, family, and financial needs is recommended to facilitate appropriate support and counseling services for the student and facilitate the improved marketing of program opportunities along with information on nontraditional job opportunities. Shank also recommended that continued monitoring of handicapped students be conducted to ensure adequate provision of services when necessary. Participant socialization was recommended to help develop student support systems. The author further suggested that exit interviews of all participants be conducted and that there be a concerted effort to disseminate collected information.

Dykman (1993) documented the story of four National FFA Organization officers who gathered at a strategic planning meeting in Arlington, Virginia. The four officers reported that from being a part of the National FFA Organization they learned self-confidence while establishing employer contacts and receiving internship offers and

scholarships. They claimed the National FFA Organization provided them with a role model. All four students received FFA scholarships to universities such as New Mexico State, University of Wisconsin, Texas A & M University, and Southwest Louisiana University.

Neumeyer (1997) reported that the National FFA Organization requires students to maintain levels of excellence to be eligible to participate in associated activities. Students were required to be enrolled in at least one agricultural education course, follow a planned course of study, and develop Supervised Agricultural Experience (SAE) programs. Students were also required to pay local and state dues, attend meetings, participate in sanctioned activities, and display conduct consistent with organization ideals (National FFA Organization, 1996). Students were also required to fail no more than one class and maintain a minimum GPA, generally 2.0 on a 4.0 scale (Neumeyer, 1997).

Achievement

Proponents of the FFA have long advocated the blending of classroom and laboratory instruction, school-to-work through SAE activities, and FFA-related instruction (Cheek, Arrington, Carter, & Randall, 1994). This combination offers opportunities to use classroom knowledge in practical applications. A significant correlation was reported by Cheek et al. between FFA involvement and agriscience scores (Neumeyer, 1997).

Rasinski and Pedlow (1994) completed a study that assessed the influence of vocational programs on student achievement and explored the effect on lowering the dropout rate. They utilized the NELS:88 High School Transcript Study for data. Rasinski and Pedlow accessed the 10th and 12th grade panel sample, which included 14,625 participants. The data available included student-level data and course-taking histories. Linear and logistics regression techniques were used to analyze the data. Case weights were used to adjust for unavailable transcripts, and additional corrections were made to accommodate clustering and stratification of the sample. The researchers reported that vocational program students score lower in achievement than academic curriculum students, but their scientific and mathematics scores do not differ significantly from general curriculum students. Their reading scores were significantly lower than general curriculum student reading scores, however. The authors also found no effect from vocational

curriculum on mathematics, reading, and scientific achievement scores. Initial analysis of the data showed that vocational education accounted for a higher percentage of the dropout's educational courses (19.80%). Logistic regression was used to test the significance of differences reported for dropout rates for academic (.26%), vocational (4.0%), and general curriculums (24.6%) while controlling for background characteristics and prior achievement. They found that a significantly smaller number of vocational students dropped out than general curriculum students.

Rasinski and Pedlow's (1994) findings are in agreement with similar findings reported by Grasso and Shea (1979), Perlmutter (1982), and Wagner (1991). The authors did note that early dropouts, those who drop out of school prior to classification in academic or vocational programs, were automatically assigned to the general curriculum group. Rasinski and Pedlow (1994) performed an alternate analysis with logistic regression on the effect of vocational courses in 9th and 10th grades on the 11th and 12th grade dropout rates. Findings indicated that vocational course-taking did not effect the dropout rate. Analysis of the sample suggests that vocational education may have an indirect effect on dropout rate, which is mediated through class rank. The authors speculated it is possible that improved performance in regards to peers may present a positive experience for continuation in school; however, the study did not measure or identify student motivations for course taking and graduation, precluding the declaration of a conclusive reduction in the dropout rate. Rasinski and Pedlow were able to identify different vocational program types: (1) standard vocational track (43.4%), in which students are less likely to take mathematics and scientific courses, (2) vocational and academic track (50.1%), and (3) vocational and rigid academic track (6.4%).

NELS:88 is the National Education Longitudinal Study of 1988 and was conducted by the National Center for Education Statistics (NCES) in response to the legislative mandate to collect and distribute education statistics and related data (NELS:88, 1994). The NELS program is a long-term project that studies educational, vocational, and personal development of students at various grade levels. The program also collects data on personal, familial, social, institutional, and cultural factors, which impact or affect the students' development.

Neumeyer (1997) completed a study that investigated the relationship between FFA participation levels and academic achievement of secondary agricultural education students.

Participants completed a limited, facilitated questionnaire designed to record participation in extracurricular activities, work/chore related activities, and activities not related to school. Of the total sample (n = 188, school student population), 26.6% were National FFA Organization participants. Hour estimates for time were recorded with Likert-type scales. Demographic data were also recorded along with perceived grade point average (GPA) rankings. Neumeyer used descriptive correlational statistics to analyze the data. Findings included the following: (1) the majority of FFA participants were male (63%), (2) white non-Hispanic (85.1%), and (3) had perceived GPAs of "C"s or better (93%). The researcher also reported a moderate relationship between perceived level of participation and academic performance. Data recorded also indicated that perceived extracurricular hours (7-9 hours, 29.2%) and nonschool work hours (1-3 hours, 33.3%) were minimal. The recorded time for work/chore hours (15+ hours, 29.2% and 7-9 hours, 27.1%) were somewhat higher. Results of the study were not generalizable to the national student population due to the restricted population and sample size.

Tuma (1994) published an article that explored previous research efforts to collect valid reliable data on vocational course-taking, transcript use, vocational enrollment trends, and policy implications of findings. The author concluded that transcripts are reliable and valid data sources for reporting enrollment data along with course participation information. Transcript records also include extensive socioeconomic and demographic data and provide the ability to categorize student samples and course data in a cost-effective manner. Some of the disadvantages reported by Tuma included size and complexity of the data files, which made them cumbersome to use. Current samples were not large enough to allow for state-by-state estimates of vocational education enrollments. Tuma concluded that the sampling strategy is inappropriate for use as a monitoring tool for local and state compliance with federal laws and regulations or use of funds. He also reported that data collection and release would require a time frame of every two to three years to aid administrators, policymakers, and researchers. Test quartile variables in the High School & Beyond (HS&B) and the NELS:88 may be used to examine relationships between course taking and test scores; however, since the quartiles are independently based on test score distributions in 1982 and 1992, "they cannot be used to assess how test scores have changed over time to course-taking."

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Assessing Benefits

A survey of 199 student members of participating VSOs by Collins (1977) revealed that VSO members felt that the most popular benefits that they received were (1) working as part of a team, (2) making decisions, (3) initiating ideas, (4) competing fairly with others, and (5) developing peer relationships.

A study by Rickets and Newcomb (1984) showed those National FFA Organization members from both superior and nonsuperior chapters possess significantly more leadership and personal development abilities than nonvocational agriculture students. The National FFA Organization provides a chapter award system under which local chapters may apply for and receive "Superior Chapter" ratings. In this study, "superior" chapters are those that have received "Superior" ratings through this awards system. Nonsuperior chapters are those that have not received such recognition. The researchers also discovered that vocational agriculture students/FFA members possess significantly more leadership and personal development skills than nonvocational agriculture students do. Fitzhugh-Pemberton (1996) reports that one of the most significant aspects of one organization (FBLA-PBL) is networking. Fitzhugh-Pemberton states that "there are many contacts made available to members and advisors who attend conferences, seminars, workshops, and meetings that are directly and indirectly affiliated with FBLA-PBL" (p. 20).

Stone (1988) completed a study to identify relationships between marketing education and academic performance, work attitudes, and career aspirations. He also explored the relationship between "new basic" coursework and interest. Stone used the High School and Beyond (HSB) dataset from NCES. Stone accessed information of the 10th and 12th grade, 1982 graduates. The sample included 1,198 cases, which included all students in one or more semester courses in marketing education. Path analysis was used to examine relationships between participation and interest. Results documented showed that participation in marketing education did not negatively effect academic achievement or cooperative education. No relationships for increased work in academic courses and aggregate achievement in math, vocabulary, and reading was shown. Participation in VSOs and assuming leadership positions does show a benefit.

Malone (1983) has disagreed with others, citing VSOs such as DECA, FFA, and VICA as being voluntary. Malone concluded that students who participate probably have favorable attitudes initially as well as family support. Because of this reasoning, Malone contended that the students in these VSO are not representative of all students enrolled in vocational education.

Vickers (1994) completed a study that investigated the impact of FHA/HERO cocurricular activities on student leadership skill development. Vickers compared three groups: (1) 1993-1994 FHA/HERO members in home economics classes with state or national affiliation, (2) 1993-1994 home economics students without FHA/HERO membership, and (3) 1993-1994 FHA/HERO members in home economics classes without state or national affiliation within the last three years. A purposive stratified random sample was used to select the sample from students having similar regional backgrounds to complete the causal-comparative research. A total of 1,436 participants completed self-administered questionnaires that collected data on Leadership Development Activities Inventory (LDAI), Leadership Skill Inventory (LSI), and Student Demographic Data Inventory (SDDI).

Gordon, Yocke, and Bess (1995) researched the relationship between student participation in VICA and their mastery of personal development skills. The objectives of the study were to determine the biographical characteristics of VICA members in the study, assess the extent to which VICA members perceive they have developed personal development skills, and determine the relationship between the level of VICA participation and the perceived development of personal development skills. A three-part questionnaire was used to collect data. The authors found that the typical VICA member was white, female, and had been a member of the VICA secondary program for less than two years. They also reported that minorities in the study were underrepresented (p. 9). Reported perceptions of VICA members included seeing themselves as having achieved less than optimum levels of leadership skills while perceiving themselves as having a higher level of personal development skills in citizenship, cooperation, and self-confidence (p. 10). The researchers also concluded that respondents' level of personal development skills increased as their participation in VICA increased. These personal development skills coincided favorably with the foundation skills and workplace competencies presented in the SCANS report (p. 10).

Assessing Achievement

Weber (1988) reported a comparative reanalysis of dropout rates reported in federal reports and previous research using later 11th grades or higher and after-completion data from the High School and Beyond (HSB) database. Weber reviewed research completed by Peng and Takai (1983). Peng and Takai's research investigated the dropout rates for academic, general, and vocational curriculums using data from the National HS&B Survey. Peng and Takai reported that the highest dropout rate for high school is for students enrolled in vocational education. The research was based on 10th graders' responses to interest and intent to participate in vocational education. Weber reported, however, that most states generally preclude vocational education participation until the 11th grade. The research also did not address the tendency of students to transition through various curriculums while in high school. Additional research reviewed by Weber reported similar findings for secondary vocational curriculum dropout rates. These included *School Dropouts: The Extent and Nature of the Problem* (U.S. General Accounting Office, 1985) and *The Condition of Education 1985 Edition* (National Center for Education Statistics, 1985). Researchers Mertens, Seitz, and Cox (1982), Coombs and Cooley (1968), Grasso and Shea (1979), Woods and Haney (1981), Perlmutter (1982), and Weber (1986) reported conflicting results. These researchers found that vocational education curricula had positive effects on secondary retention and graduation rates.

Weber (1988) hypothesized that dropout rates for all three curriculum areas would be the same. He found that the correlation between the student's designated curriculum for follow-up data and the number of vocational credits earned was equal to correlations of 10th grade data and vocational credits earned using point-biserial correlations. The second issue addressed relationships of socioeconomic status (SES), academic performance, minority status, and parental education levels across curriculum groups and was analyzed using the analysis of variance (ANOVA) technique. Weber found that dropout rates for the vocational group (16%) were higher than those for academic curriculum students (3%) but lower than the general group (21%). Weber also found that the 1982 designations for curriculum and earned credits had a significantly higher correlation than the 1980 designations and earned credits. Weber also found that the SES, academic achievement, and parental education levels of vocational students was lower than the other curriculum groups and that the proportion of minority students in the vocational group was significantly higher. Weber noted that the eta values reported that the effect for achievement

was large (.47), SES medium (.35), parental education level medium (father [.14]), mother [.24]), and minority status small (.09). Based on the size of the coefficients and previous research, the predicted dropout rate should be higher than for the academic and general groups; however, the actual sample proportion does not support that prediction.

Applicable Factors

Gingchi (1986) reported that the vocational education system offered a range of programs. Many programs offered marketable skills training, and others offered homemaking skills and consumer education. Gingchi referred to the following nine traditional program areas for vocational education: (1) agriculture, (2) distribution, (3) health, (4) consumer and homemaking, (5) occupational home economics, (6) industrial arts, (7) office occupations, (8) technical, and (9) trade and industrial. These programs are available through comprehensive high schools, which offer vocational and general academic programs. The majority of the student population was enrolled in the general academic track. Vocational high schools offered academic and vocational tracks, with all students enrolled in vocational programs. Students attending area vocational centers received their academic education at other schools or institutions (Golladay & Wulfsberg, 1980, as cited in Gingchi, 1986).

Gingchi (1986) recommended the use of educational and economic indices to evaluate the effectiveness of vocational education programs with vocational and manpower objectives. Indices for "economic success include earnings and unemployment rates of vocational students and general and academic students (p. 11). Successful program indicators include likelihood ratios for continuing education of different curricula. Dropout rates for different curricula were also recommended as an educational index.

A synopsis of previous studies (Mertens, McElwain, Garcia, & Whitmore, 1980, as cited in Gingchi, 1986, pp. 13-14) includes the following findings:

- Higher number of vocational education students entered the labor markets; however, unemployment rates were not significantly different.
- A majority of vocational education students found jobs related to their occupational area of training.

- No consensus was reported for the level of earned incomes of vocational versus nonvocational students.
- A majority of vocational students were satisfied with their jobs.
- General satisfaction was reported by employers of vocational students, along with higher job satisfaction levels for vocational students versus comparable nonvocational entry-level employees.
- Approximately 33% of vocational students continued education beyond secondary level.
- The majority of vocational graduates (80%-90%) were satisfied with their training.

Gingchi (1986) reported additional factors which influenced placement (e.g., educational, economic, socioeconomic). These factors included the following:

- High school choices
- Family background, individual ability, and gender directly influence students' aspirations and curriculum selection
- Parental education level and encouragement for continued education affect children's choices and aspirations
- Parental occupation influences children's aspirations and occupational choices

RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the project was to examine the scope and effects of VSOs on student achievement. Because of the compressed time frame involved and the restricted nature of the study, the examination was limited to extant literature and data sources.

The research question addressed by the study was the following:

> What research and other data are available to document the effect of VSO participation on student outcomes, in terms of both academic achievement and achievement in other arenas?

Results

Over 250 documents were identified as potentially relating to the purpose of the study. In spite of the huge literature base discussing VSOs, this in-depth review and analysis of the applicable literature revealed only a limited amount of research that documented or chronicled the impact of VSOs on student achievement. As reported by Wegner (1980), a profound belief exists among educators that extracurricular activities are beneficial to students; however, little research has been completed to document these claims. During the review and synthesis portion of this project, Wegner's claims were substantiated. A limited amount of documented research was identified that adequately investigated the impact of VSOs. Much of the literature reviewed advocated benefits that (1) were not adequately verified in the reports, (2) were supported by limited or weak methodologies in areas of research and analysis, and (3) did not provide sufficient detailed explanation to support duplication of the results.

Descriptive data analysis was used more than any other data analysis technique found in the literature. Descriptive processes can provide information for computing needs assessments (Malhotra, 1999). Frequency distributions may be used to describe and summarize the data collected from a sample by indicating the number of occurrences for variables and defining the proportion of each occurrence within the sample (Zikmund, 1994). Frequency distributions also provide the mode (i.e., value occurring most often) and may be used to document dominant trends and organize data by groups or categories for comparisons of frequency distributions in two or more variables. Statistical analysis

techniques to analyze variance have been employed to identify statistically significant differences between variable group characteristics (Malhotra, 1999; Zikmund, 1994). Linear and logistics regression techniques have been utilized to identify significant contributions to prediction equations affecting sample variance (Hair, Anderson, Tatham, & Black, 1995). Path analysis has also been used to generate causal models. This analysis technique is useful in identifying direct and indirect effects (Malhotra, 1999). Discriminant analysis has been employed to generate prediction models for outcomes (Zikmund, 1994).

Qualitative and quantitative research methods have been used to address the questions of VSO impact, outcomes, and benefits. Neither data analysis philosophy—quantitative or qualitative—is better than the other. The selection and use of an analysis approach is dependent on the desired end goals and analysis technique assumptions. Goals are dictated by the research questions, objectives, and hypotheses identified by the researcher. Assumptions are standard analysis limitations that must be met to appropriately use the statistical technique selected (e.g., sample size, variable measures, normality of data, collinearity).

Analytical Approaches

Qualitative research was used to record impact, outcomes, and benefits of VSO participation by a number of reviewed authors. Descriptive data analysis techniques were the major statistical approach found in this literature review effort (Bowers, 1982; Brannon et al., 1988, Dykman, 1993; Townsend & Carter, 1981). Path analysis and causal-comparative techniques were used in only a few of the studies reviewed.

Gingchi (1986) used path analysis to generate a causal model for the determination of direct and indirect effects. Shank (1992) used discriminate analysis with biserial correlations to develop a dropout prediction model for job-specific training programs in Ohio. Shank emphasizes that the model is a prediction model not a causal model (p. 120). White (1982) used multivariate analysis of variance (MANOVA) statistical analysis along with Duncan's multiple range test to identify significant differences in leadership categories among five Ohio VSOs for the school year 1981-1982; and linear and logistic regression was employed by Rasinski and Pedlow (1994) to analyze the NELS:88 database for academic achievement.

While no research philosophy is better than another is, they all have their uses. The determination of the research techniques and statistical approaches selected are based on the decision of the most appropriate combination to achieve the desired goal. The use of qualitative research methods is imperative for the identification of underlying constructs and factors. The utilization of quantitative research techniques advance the practice of mathematically measuring identified constructs and factors. Both research approaches are necessary to obtain detailed generalizable research results that are useful in identifying, documenting, and analyzing the complex questions proposed by education.

Development of Survey for VSO State Directors

Although the basic purpose of the current project did not include collection of data regarding state-level commitments to and support of VSOs, both the literature and simple logic support such an effort. Indeed, if one would ask what the impact is of any system, a prerequisite question should be what the level of input is. Thus, we decided to develop an instrument designed to collect such data and to pilot test it as a part of our effort.

A self-administered, mail survey which was adapted from Collins (1977) was distributed to selected state VSO directors for completion. The purpose of the survey was to collect the following information: (1) endorsed VSOs and membership numbers; (2) administration of secondary and postsecondary VSOs; (3) credited course information; (4) compensation structure for organization advisors; and (5) private, state, and federal funding levels. Participants were encouraged to provide any additional pertinent information. The comments and responses received from the initial distribution of the survey will be used to further refine the survey.

Potential participants were contacted by telephone to obtain participation commitment. Telephone communication was also used to prenotify participants of the distribution of the survey. Participants were granted the choice of responding to the survey by telephone, fax, or e-mail. Those options were available for distribution and return of the survey as designated by the participant. A ten-day response time was granted before follow-up telephone calls and e-mails were sent to participants that had committed to respond to the survey.

The survey validation panel, field test group, and pilot study responses indicated that the survey is adequate for collecting the kinds of data that would be necessary in a study designed to document VSO-related efforts at the state level. The preliminary data collected, although not being reported here, was encouraging with regard to the potential for such a study.

Conclusions

VSOs have existed formally since 1928. Today, about 1.5 million students are enrolled as members at any given time. All of the traditional vocational service areas at the secondary level provide VSOs for their students. Since 1950, with the signing of Public Law 81-740, the precedent has been in place that VSOs may be considered cocurricular. The designation of cocurricular status means participation in VSO can be considered a part of the instructional program and curriculum rather than a program adjunct.

> ***Conclusion.*** Near-universal agreement exists in the vocational education community that VSO programs are an integral and critical part of local and state programs for vocational education. VSO designation as cocurricular programs, rather than as extracurricular activities, typifies that level of acceptance within the profession.

Benefits alleged to accrue to students from VSO participation are myriad, ranging from improved self-concept to lifelong economic and social advantages. Proponents range from current VSO members to a whole host of national leaders, including one ex-president, Jimmy Carter, who express their faith in VSOs as a tool for improving students' lives. A few research studies have been conducted and reported that tend to support at least some relationship between level of participation in VSOs and various forms of actual or self-reported, perceived benefits. In general, the literature provides only anecdotal evidence to support such claims. Theoretical reasons that VSO participation should provide lasting benefits and anecdotal and descriptive studies implying that such benefits actually exist abound. Nevertheless, research to support such claims simply does not exist in the current literature.

Conclusion. Broadly accepted claims regarding the benefits to students from VSO participation are not supported by generalizable research.

Current vocational education enabling legislation requires updates to the structure and implementation of vocational education programs with great emphasis in the area of accountability. Current and follow-up accountability data are now required of states in the areas of attainment of academic and proficiency skills. Existing research on VSO impact does not provide the evidence needed to provide accountability with regard to VSO expenditures.

Conclusion. Research should be conducted to determine whether student participation in VSOs has an effect on academic and later life achievement to either substantiate or refute the widely held belief that such benefits exist.

Recommendations

We strongly recommended that research in the area of VSO impact, benefits, and assessments be conducted. Due to the large number of and differences among VSOs (e.g., agriculture, business, family and consumer, health, marketing, technology, trade and industrial), individual research is called for in the different vocational service areas. Individual research by service area will not only provide baseline data applicable to individual programs, but will also provide data in such a way that stronger VSOs are not penalized by collection of amalgamated data only. Documentation of strengths and weaknesses will facilitate the identification of focus areas that may be used for short- and long-range planning purposes to improve weaknesses and capitalize on strengths in each of the VSOs.

Recommendation. Separate programmatic research designed to determine the short- and long-term impacts of VSO participation should be funded at levels adequate to answer the substantive questions implied by the current study, for each of the major VSOs.

Comparative research is also recommended across service areas to identify relative benefits and impacts. The identification of strengths and weaknesses in the various VSOs

would make possible improvements in all. This approach would also facilitate program improvement, including meeting the needs as dictated by legislation.

Recommendation. Cross-VSO research to identify "what works in VSOs" should be conducted with the intent of building on the obvious strengths of the various VSOs.

An examination of the current assessment structures on a state-to-state level would facilitate the development of assessment baselines in terms of certification and graduation levels, placement reports for skill use, and meeting participants' special needs.

Recommendation. To facilitate compliance with the 1998 Perkins Act, research should be conducted to establish assessment baselines that are consistent with information and reporting structures for all states.

Although every state operates VSOs at some level, data do not exist to determine the level of funding and other support being dedicated to managing and operating VSOs at the state level.

Recommendation. Research using the state survey included in this report (Appendix B) should be conducted to establish baselines regarding the levels of commitment to VSOs by states.

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